Crab Processing Sideboard Caps

A Discussion Paper

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North Pacific Fishery Management Council
and
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1 Introduction

Crab processing sideboard caps were implemented for the 2000 fishing seasons in the BSAI to protect non-AFA processors from adverse impacts caused by the implementation of cooperatives. The structure of the crab processing caps followed the formula outlined in the AFA. That section of the AFA indicated that the 10 percent ownership and control standard should be used to determine which facilities should be capped. The specific language defining crab processing caps is found in Section 211(c)(2)(A) of the AFA. That language is as follows:

> "*Effective January 1, 2000, the owners of the motherships eligible under section 208(d) and the shoreside processors eligible under section 208(f) that receive pollock from the directed pollock fishery under a fishery cooperative are hereby prohibited from processing, in the aggregate for each calendar year, more than the percentage of the total catch of each species of crab in directed fisheries under the jurisdiction of the North Pacific Council than facilities operated by such owners processed of each such species in the aggregate, on average, in 1995, 1996, and 1997"*

The above section of the Act applies only to processors owned or controlled by AFA motherships and shorebased processors. Motherships that are owned by AFA catcher processors are currently exempt from crab processing caps. Because AFA catcher processors can buy motherships to process crab, some individuals have expressed concern that profits earned in the pollock fishery could be used by catcher processors to create an advantage under the system as it is currently implemented.

The first crab fishery to be prosecuted after the processing caps were implemented was the 2000 opilio fishery. The purpose of this paper is to describe how the fishery changed because of the caps, and provide information on alternatives the Council is considering to modify the program. As the Council considers changes to the crab processing caps, they will need to make their recommendations in light of section 213 of the AFA. Section 213 states that:

> *"...The North Pacific Council may recommend and the Secretary may approve conservation and management measures in accordance with the Magnuson-Stevens Act--*
>
> > *1) that supersede the provisions of this title, except for sections 206 and 208, for conservation purposes or to mitigate adverse effects in fisheries or on owners of fewer than three vessels in the directed pollock fishery caused by this title or fishery cooperatives in the directed pollock fishery, provided such measures take into account all factors affecting the fisheries and are imposed fairly and equitably to the extent practicable among and within the sectors in the directed pollock fishery."*

Therefore to change any aspect of the crab processing sideboards that are currently in place, the Council will be required to justify such changes in terms of mitigating adverse effects on the crab fishery which were caused[1] by processing caps.

[1]It is unclear whether this section of the AFA implies that only harm already shown to have occurred may be mitigated, or whether this section of the Act can be interpreted in a broader sense to mitigate perceived harm which may occur as a result of the Act.

Should the Council elect to alter the current crab processing sideboard program at the September meeting, those changes could be implemented in the final AFA rule. The final rule is expected to be in place for the 2001 fishing season.

1.1 Document Outline

This discussion paper is divided into four sections. The first section introduces the problem that the Council is facing (whether or not to alter the crab processing sideboards). The second section describes the BSAI crab fisheries in an historical context. Section three describes the current fisheries and outlines some possible changes to the program. Section four is the summary and conclusion section.

1.2 Summary of the Alternatives Proposed by The Council

The Council requested that four alternatives be considered in this discussion paper. The first option would be the no action alternative. After reviewing this discussion paper the Council may decide that there is insufficient justification to modify the crab processing sideboards as required under section 213. The second option would be to allow AFA processors to exceed the cap by 10 to 20 percent without being subject to any penalty. The third option would be to change the years used to calculate the caps. Currently the processing history during the years 1995-97 is used to calculate the caps. The Council has added an alternative that would also include the processing history from the 1998 fishing seasons. Because the AFA sector processed a higher percentage of the opilio crab in 1998, they would be granted a higher cap in future years if that year was added. The fourth and final alternative requested by the Council would be the complete elimination of the crab processing caps. Elimination of the caps would allow AFA processors in the inshore and mothership sectors to compete directly with the non-AFA processors for the right to process the entire GHL. AFA pollock catcher processors would still be banned from participating in this fishery, but they could use other floating processors[2] to process crab.

2 History of the BSAI Crab Fisheries

This section of the document will provide a summary of crab fisheries in the BSAI from 1995-98[3]. Emphasis will be placed on historical catch by fishery during those years and the current fishery opening dates. The first issue is important because that information is used to calculate the crab processing sideboard caps. Season dates are important because they provide insights into which fisheries are open at the same time, as well as how long vessels may have between seasons to off-load their crab harvests before they must return to the fishing grounds for the next fishery opening.

2.1 Seasons and Fisheries

The current opening dates for the BSAI crab fisheries are reported in Table 1. Some of the fisheries will not open this year due to low GHLs. The *C. bairdi* fishery has not been open since 1997, and the Pribilof and St. Matthew king crab fisheries were not opened in 1999. These fisheries are not expected to be opened to fishing

[2]The Highland Light is an AFA catcher processor. The owners of the Highland Light also own at least 10 percent of a floating crab processor, which under current regulations is not subject to crab processing sideboards.

[3]A list of the opilio crab processors from 1995-2000 is included as Appendix 2 to this document.

in 2000. There is also concern for the 2001 *C. opilio* fishery. It has been speculated that the GHL will once again be very low or the fishery will not open. However, the status of *C. opilio* and other crab fisheries will not be decided prior to release of this document.

Table 1. Summary of BSAI Crab Season Dates

BSAI Crab Fisheries	Date Fishery Opens
Aleutian brown king crab	August 15
Pribilof king crab (red and blue)	September 15
St. Matthew king crab (blue)	September 15
Bristol Bay red king crab	October 15
Bering Sea *C. bairdi* Tanner crab	Concurrent to Bristol Bay red king crab, Oct. 15 -If no Bristol Bay king crab fishery, opens Nov. 1
Bering Sea *C. opilio* snow crab	January 15
St. Matthew brown king crab	Open by Commissioner's permit
Pribilof brown king crab	Open by Commissioner's permit

Source: ADF&G Staff supplied summary of crab seasons.

2.2 Amounts of Crab Processed

Processing data from the 1995-98 BSAI crab fisheries are reported in Table 2. The data are derived from ADF&G fishtickets. Only commercial processing of crab harvested in the open access fishery is included. Data from the 1999 BSAI crab fisheries and the 2000 opilio fishery have not been included in Table 2. The focus of the paper is to provide information to the Council which will aid them in deciding whether to change the crab processing sideboard caps. Options to change the caps which are under consideration by the Council include the years 1995-98. Therefore, information on the 1999 and 2000 fisheries may have been useful as background information, but the are not being considered as years to be included when calculating processing caps. Using 2000 as a year to determine opilio caps would not make much sense anyway, because that fishery was prosecuted under the processor sideboard system currently in place. Therefore, the processing levels were artificially constrained by the caps.

2.3 Overages and Underages in the Preseason GHL

One of the dilemmas facing managers of the crab fisheries is have an estimate of total harvest in a timely manner. GHLs are set as prior to the start of the fishing season. Then as the fishery takes place managers track the CPUE in addition to the total harvest to determine when the fishery should be closed. This management strategy often results in the preseason GHL being over or under-harvested (Table 3)[4]. This causes a problem for AFA processors trying to achieve, and yet stay within their caps. AFA processors are forced

[4]Smaller GHLs are generally more difficult to manage inseason. A small GHL for the opilio fishery is considered to be less than 100 million pounds, for BB red king crab it is about 15 million pounds.

to try and estimate what the total harvest will be at the end of the season. If they estimate that the GHL will be exceeded, they will want to process additional crab. However, the processors must be cautious when they make this decision, because going over the cap could lead to severe penalties. Perhaps the most serious of which would be the loss of AFA status, meaning they would lose their rights to participate in the BSAI pollock fishery.

Table 2: Processing of BSAI crab by AFA and Non-AFA processors

Crab Species	Year	AFA	Non-AFA	Grand Total	AFA % of Total
Blue King	95	2,849,530	1,734,680	4,584,210	62.16%
	96	2,590,357	1,428,188	4,018,545	64.46%
	97	3,193,715	1,968,319	5,162,034	61.87%
	98	2,078,087	1,408,679	3,486,766	59.60%
Blue King (1995-97)		8,633,602	5,131,187	13,764,789	62.72%
Blue King (1995-98)		10,711,689	6,539,866	17,251,555	62.09%
Brown King	95	4,897,107	3,667,617	8,564,724	57.18%
	96	5,586,570	2,809,930	8,396,500	66.53%
	97	2,075,350	3,954,711	6,030,061	34.42%
	98	2,697,793	3,273,345	5,971,138	45.18%
Brown King (1995-97)		12,559,027	10,432,258	22,991,285	54.63%
Brown King (1995-98)		15,256,820	13,705,603	28,962,423	52.68%
Red King	95	731,420	599,424	1,330,844	54.96%
	96	6,489,994	2,456,661	8,946,655	72.54%
	97	7,657,342	2,103,882	9,761,224	78.45%
	98	12,121,625	3,406,497	15,528,122	78.06%
Red King (1995-97)		14,878,756	5,159,967	20,038,723	74.25%
Red King (1995-98)		27,000,381	8,566,464	35,566,845	75.91%
Tanner (bairdi)	95	2,875,057	1,368,479	4,243,536	67.75%
	96	1,285,759	520,664	1,806,423	71.18%
Tanner (bairdi) (1995-97)		4,160,816	1,889,143	6,049,959	68.77%
Tanner (bairdi) (1995-98)		4,160,816	1,889,143	6,049,959	68.77%
Tanner (opilio)	95	42,563,046	32,746,141	75,309,187	56.52%
	96	36,355,881	29,414,894	65,770,775	55.28%
	97	72,621,833	46,921,191	119,543,024	60.75%
	98	176,245,213	75,943,718	252,188,931	69.89%
Tanner (opilio) (1995-97)		151,540,760	109,082,226	260,622,986	58.15%
Tanner (opilio) (1995-98)		327,785,973	185,025,944	512,811,917	63.92%

Source: ADF&G Fishticket data 1995-98.

Note:

1) The bairdi fishery was not open in 1997 or 1998, therefore the 1995-97 and 1995-98 options yield identical results.

2) The processor reported on the ADFG fishticket was used to determine AFA and Non-AFA amounts. If custom processing has taken place, that would likely alter the above results. Information on custom processing is required to be reported in the Commercial Operator's Annual Reports (COAR). That data was not researched to determine how the above numbers may be impacted.

Table 3. GHLs and harvest of opilio and Bristol Bay red king crab by year

	Opilio			Red King Crab		
Year	GHL	Harvest	% over GHL	GHL	Harvest	% over GHL
1990	139.8	161.8	15.7	17.1	20.4	19.3
1991	315.0	328.6	4.3	18.0	17.2	-4.4
1992	333.0	315.3	-5.3	10.3	8.0	-22.3
1993	207.2	230.8	11.4	16.8	14.5	-13.7
1994	105.8	149.8	41.6	0.0	0.0	n/a
1995	55.7	75.3	35.2	0.0	0.0	n/a
1996	50.7	65.7	29.6	5.0	8.4	68.0
1997	117.0	119.5	2.1	7.0	8.7	24.3
1998	225.9	243.3	7.7	15.8	14.2	-10.1
1999	186.2	184.5	-0.9	10.1	11.0	8.9
2000	26.4	30.8	16.7			

Source: ADF&G Annual Management Reports

3 Current Fisheries

Section 3 will describe the current system for managing processing caps and the impacts that the program has had on the fisheries. Because only the 2000 *C. opilio* fishery has taken place when processing caps were in effect, our experience is limited[5]. Also the crab fisheries take place at different times of the year and are different lengths (and GHL's). These factors may cause the processing caps to vary by fishery. However, until more information is available the impacts will be speculative.

3.1 Structure of the Processing Caps

Processing caps are currently based on the AFA processing sector's[6] 1995-97 processing history expressed as a percentage of total processing over those years. Processing caps are then calculated for each BSAI species (bairdi, opilio, red king, blue king, and brown king). Because the caps are based on the amount of a species processed and not the amount of a fishery processed, it leaves room for AFA processors to, for example, move some of the history they earned from processing king crab in the Pribilofs and use that cap to process Bristol Bay red king crab. In other, words AFA processors could potentially take advantage of price and quality differentials among fisheries to increase profits under the current system. ADF&G ex-vessel price data from 1996-98 shows that there is often a 5 to 12 percent price difference in the two fisheries. Some years the price paid in the Bristol Bay fishery is higher and some years the prices are higher in the Pribilof fishery. These price differences may be enough to cause effort to switch from one fishery to another. It may also be more cost efficient for a plant to only open for one fishery instead of two, if they can process their entire cap during that opening.

[5]Appendix 1 to this document is a report to the Council from ADF&G on the impacts processor caps had on the 2000 *C. opilio* fishery.

[6]Any entity in which 10 percent or more of the interest is owned or controlled by another individual or entity shall be considered the same entity as the other individual or entity for the purpose of determining which processor's catch history will be included in the AFA sector when calculating caps.

3.2 Impacts on Catcher Vessels

The processing caps seem to represent a tradeoff between protections for non-AFA processors and market considerations for catcher vessels. Both of these groups are potentially negatively impacted by the AFA. The non-AFA processors requested that crab processing caps be included in the AFA when it was being developed by Congress. They were concerned that AFA processors would be allowed to take advantage of changes in the pollock fishery to increase their participation in the crab fisheries. Therefore, crab processing sideboards were specifically structured in the Act, and NMFS implemented those caps as defined by Congress.

Catcher vessel owners have voiced strong concerns at recent Council meeting and during past processor sideboard committee meetings that implementation of processing caps would negatively impact their businesses. Their concerns focused in two primary areas. The first is that they would either lose their existing market because the processor did not have enough cap to take their deliveries or the processor would reach their cap part way through the season and be forced to turn catcher vessels away. The second concern dealt with undermining their ability to negotiate an acceptable ex-vessel price. Catcher vessels indicated after the 2000 opilio fishery that they felt they would have received a higher ex-vessel price had processing caps not been in place. Their logic was that because the AFA processors had a limited amount of crab they could process they had no reason to competitively bid for additional crab deliveries. The non-AFA processors had less competition, because the AFA processors role in the market was reduced, and they could offer a lower price under those market conditions than then would have if the AFA processors were more active in the market for crab. It is possible that this was the case. However, the difference in price that was actually paid during the 2000 opilio fishery, and what would have been the ex-vessel price with no processing caps, cannot be determined.

A low GHL during the 2000 opilio fishery also resulted some processors electing not to buy and process crab. Fewer processors in the market may have reduced competition and, as a result, ex-vessel prices for opilio. If catcher vessels received a lower price during the 2000 opilio fishery then they felt they should have, it may be attributable to both few processors caused by a low GHL[7] and processing sideboard caps.

3.3 Management Alternatives Proposed by the Council

Four basic management alternatives are being considered for the crab processing caps. Those options are discussed below. The options selected by the Council for consideration range from keeping the current cap structure to completely removing the processing caps. Other alternatives being considered by the Council fall between those two options, in terms of their impacts on AFA processors, non-AFA processors, and catcher vessels.

As mentioned earlier in the document, the Council must justify any changes to the structure of the current crab processing caps in terms of Section 213 of the AFA. It is likely that the SOC and NMFS will look closely at that justification when determining whether or not to implement any changes recommended by the Council.

[7]The price for opilio was higher than it was in previous years, because of reduced product supply, but fishermen felt the price should have been even higher than it was in 2000. Most fishermen attributed the price being lower than expected to reduced competition for their product.

3.3.1 Status Quo

The status quo alternative was described in section two of this document. Should the Council choose not to make any changes to the existing program, the impacts are those presented in that part of the document and other analyses used to implement the program.

3.3.2 Allow 10 to 20 Overage of Cap

This option would allow processors to exceed their processing caps by a set percentage each year without any penalty. The range under consideration by the Council is 10 to 20 percent. If approved the members of the AFA sector would be allowed to exceed their processing caps (based on the preseason GHL) by between 10 and 20 percent each year. Allowing overage takes into account fisheries mangers inability to exactly estimate the appropriate harvest levels and then shut the fishery down once that level of harvest is taken.

To show how the overage allowance works we will provide a couple of examples. All of the examples will use the 10 percent overage level. This alternative was selected simply because it makes the math easier, and not because it is a better alternative than the other percentages being considered.

Assume that the mid-point of the preseason GHL is 100 million pounds. For simplicity, we will also assume that the AFA sector's cap is equal to 50 percent of the GHL. That means the AFA cap is 50 million pounds. Allowing a 10 percent overage without penalty means that the AFA processors can actually process up to 55 million pounds. The amount of the cap is now set and will not vary, even if the GHL is exceeded. Now, we can walk through three different scenarios. The first assumes that the GHL is exactly harvested, the second assumes the GHL was exceeded by 10 percent, and the third assumes the GHL is exceeded by 20 percent.

When the fishery is closed down exactly when the 100 million pound GHL is taken, the AFA processors are basically given a 10 percent increase as a result of management uncertainty. Recall that AFA are not guaranteed any amount of crab under the sideboard caps. They must offer prices which attract owners of catcher vessels to deliver to their plant, in order to process up to the amount allowed under the cap. Under the original program they would have been required to stop processing at 50 million pounds, but they were allowed to process up to 55 million pounds, in this example. In essence, the 10 percent overage effectively results in a larger cap for the AFA processors.

If the GHL is exceeded by 10 million pounds (10 percent), the AFA sector would be allowed to process up to 55 million pounds, or exactly their 50 percent of the GHL. In this case the 10 percent overage actually allowed the AFA sector to process their original cap, in percentage terms. Finally, if the GHL were exceeded by 20 percent (120 million pounds harvested), then the AFA sector would only be able to process 55 million pounds, with the overage rules, but they would have been allowed to process 60 million pounds under the current regulations[8]. This assumes that with the overage rules in place there would be no in-season adjustments of the total catch. Processors would base their processing cap on the preseason mid-point of the GHL plus the buffer added to the cap for management imprecision.

[8]This assumes that the processors would have been able to work with ADF&G to determine what the actual catch would be in-season. Precise in-season estimates are not likely in the near future, so while processors would technically be allowed to process 60 million pounds they probably would choose to process less to ensure they did not exceed their processing cap.

In summary the overage rule provides AFA processor some relief from the management uncertainties, in that they know the maximum amount of crab they can process as a sector before the start of the season. Under these rules the AFA sector is constrained less if the GHL is not exceeded or exceeded by a percentage less than their overage percentage. They are thus better off under the AFA cap with the built in buffer for management imprecision. If the GHL is exceeded by a percentage greater than the overage percentage then AFA processors are better off under the current system of determining processing sideboard cap amounts, if they are able to make in-season adjustments for the overage. It should be noted that any scenario that makes AFA processors better off will likely make non-AFA processors worse off.

3.3.3 Basing the Caps on 1995-98 Processing History

Adding 1998 to the years that are used to determine the AFA processing caps will increase the AFA sector's cap amounts in the red king crab (1.66 percent of GHL) and opilio fisheries (5.77 percent of GHL). Processing caps would be reduced in the blue (0.63 percent of GHL) and brown (1.95 percent of GHL) king crab fisheries and be unchanged in the bairdi fishery (Table 2). The opilio and red king crab caps increase because the AFA sector processed a larger percentage of the crab fisheries in 1998 relative to their 1995-97 average.

Adding 1998 will likely make AFA processors relatively better off when compared to the current cap and make non-AFA processors relatively worse off. The processors would be expected to be better off because processing sideboard caps increase in the opilio and red king crab fisheries. These are the most valuable fisheries and therefore the fisheries of most concern.

Catcher vessels would be better off adding 1998 if it increases competition for delivers. As stated earlier increased competition among processors is expected to improve the bargaining position of catcher vessels.

3.3.4 Abolish Crab Processing Caps

This option would completely remove the crab processing sideboard caps. AFA processors would then once again be allowed to compete for the right to process any amount of the GHL. If the AFA has economically advantaged the AFA segment of the processing sector, removing processing caps would place these processors in a better position, relative to the non-AFA processing sector, than they were in prior to the implementation of the Act. Therefore removal of the processing caps would benefit AFA processors and catcher vessels. Non-AFA processors would be in a worse position relative to the status quo and may be worse off than they were prior to the implementation of the AFA. The changes may even be larger over time if the fears of the non-AFA processors are realized. In that case, AFA processors would alter their operations as a result of rationalizing the pollock fishery to increase the relative amount of crab that they could process.

Removal of the caps may benefit catcher vessels. The catcher vessel sector has advocated the elimination of processing caps. The harvesting sector feels that they will be better off if they have more processors to negotiate with over the price of their product (Halvorsen et. al., 2000)[9].

[9]Halvorsen et al, 2000. Inshore Sector Catcher Vessel Cooperatives in the Bering Sea/Aleutian Islands Pollock Fisheries, North Pacific Fishery Management Council, February 7, 2000.

3.4 Other Potential Management Alternatives

Four other potential structural changes to the management of these caps are presented in this section. Changes that the Council may wish to consider making to the program include allowing the caps to be lifted a given number of days after a fishery closes, changing the caps from entity caps to aggregate caps, changing the caps from being species based to fishery based, or revising the cap at the end of the season based on the methodology used to estimate CDQ harvest amounts.

3.4.1 Lifting Processing caps a given number of days after the fishery closes

Lifting the caps a given number of days after the season closes is offered as a suggestion to help reduce off-load waiting times. It is a well know fact that crab mortality increases the longer crab are held on-board the vessel. Concerns were expressed at the June Council meeting that AFA processing sideboards had increased the wait time for vessels to off-load, and that if the opilio fishery had taken place during the winter as it normally does, dead-loss may have increased much more than was actually realized. To provide a relief valve for extraordinarily long off-load times the Council could allow AFA processors to resume processing (above the cap) a given number of days after a fisheries closes. This would allow catcher vessels to get crab off their boats before the rate at which crab start dying increases, or in some cases perhaps before the next fishery opens. The number of days that AFA processors would be excluded would depend on what is considered normal off-load time, how long crab can survive in the hold under the weather conditions, and when the next fishery is scheduled to open. If by using these factors a number of days can be determined, non-AFA processors would be give that length of time to get the fleet off-loaded before the AFA processors would be allowed to re-start their processing.

Allowing the AFA Sector to start processing after a given number of days does provide the potential for AFA processors to try and keep vessels from off-loading until after the cap is lifted. The extent to which this strategy could be employed is unknown. It also may encourage catcher vessels to sit and wait for the AFA processing cap to be lifted with the hopes they will receive a higher price, if they feel that dead-loss will not be a substantial problem.

3.4.2 Aggregate vs Entity Caps

There has been a substantial amount of discussion at past meetings regarding aggregate and entity level processing caps. Currently there is insufficient real time data to manage aggregate caps in-season. The current reporting system would need to undergo substantial changes before the management of aggregate caps could be enforced in-season.

Given these management constraints, it is still possible that at some point in the future the Council may wish to move to aggregate processing caps. However, aggregate caps also may carry with them their own set of problems for the industry. For example when the aggregate cap is reached, all AFA processors would need to stop taking deliveries at the same time. Removing all of the AFA processors at once may cause a larger disruption to the fleet than if processors left the fishery one at a time as they each reached their cap. There are also questions about what to do with vessels that are partially offloaded when the closure is issued. Would these vessels be allowed to continue offloading or would they be required to move to a non-AFA processor? If they are allowed to finish offloading, would that provide incentives for processors to partially offload several vessels as the cap is approached, so after the closure is announced they could continue offloading all of the boats and increase their percentage of the processing totals?

Under aggregate caps there is also the issue of who will be prosecuted if the cap is exceeded. No enforcement actions will be taken if the overall cap is not exceeded even if some firms process more than they would have been allowed under entity caps. However, if the aggregate cap is exceeded then all entities that exceeded their allocation would be subject to enforcement action.

These are just of few of the problems associated with aggregate processing caps. As additional experience is gained operating under the caps, other issues will undoubtably be raised.

3.4.3 In-season Adjustment of Catch Estimates

Another way to deal with potential differences between the preseason GHL and the actual catch in a year, might be to request that ADF&G provide their estimate of the total catch about three days after the fishery closes. ADF&G currently uses this system to determine CDQ harvest amounts and members of their staff have indicated the results are usually fairly close to the final catch. This system will be used to estimate final sideboard amounts in the Bristol Bay red king crab fishery. The estimate is made by requesting vessels to hail their approximate catch before they off-load. ADF&G already requires vessels that are leaving the BSAI to off-load (in Kodiak for example) to hail in their catch. When hailing in their catch they are required to be within a given percentage of the actual weight. Currently the regulation to hail in weights only apply when a vessel is checking out of an area. If the fishery managers determine that similar regulations are necessary to obtain accurate hail weights, that regulatory change would need to be pursued through the Alaska Board of Fish.

Implementing this procedure could provide AFA processors a better estimate of the final cap, and would be beneficial to AFA processors under either the aggregate or entity caps. If this system were implemented the processors would need to agree to abide by the final estimate once made by ADF&G, even if the final harvest estimates ultimately are determined to be larger.

3.4.4 Caps by Fishery vs Species

If the Council wishes they could change the calculation of processing caps from a species based system to one that is fishery based. However either system presents its own set of problems that would need to be overcome. Consider the Pribilof red and blue king crab fishery. Currently the processors get separate credit for the deliveries of red crab and blue crab. The red crab could be used to process red king crab from the Bristol Bay fishery and blue crab from St. Matthew if the processor elected to take deliveries from those fisheries instead.

Under a fishery based system, the Council would likely need to allow processors to process their cap amount of the Pribiliof fishery treating red and blue landings as if they were a single species. Having separate caps for red and blue crab in this fishery does not appear to make sense. With separate caps, it is possible that a processor would reach their red king crab cap and be allowed to only take deliveries of blue crab. Creating a situation were they would need to stop processing before their cap is reached, or requiring a processors to only take deliveries of one species in a mixed fishery, does not seem to be practical.

Another alternative may be to combine fisheries into a single cap. The Pribilof and St. Matthew king crab fisheries are the most obvious candidates. Both of these fisheries, when open, start on September 15. Concurrent openings have been used to divide harvest effort between these fisheries. This management strategy has forced fishermen to choose the fishery in which they wish to participate, these choices likely impact processors whose vessels fish these fisheries. Given how closely related the two fisheries are, combining the

processing caps appears to be a logical consideration. Under this scenario processors would have a king crab cap for the combined Pribilof and St. Matthew fisheries.

4 Conclusions

The basic conclusion in this discussion paper is that crab processing caps were mandated by the AFA, but the Council was given latitude in the Act to make changes so long as they can justify the changes under Section 213 of the Act. Given that latitude, the Council is considering changes that would make the processing caps less restrictive to the AFA sector. Any changes that make the caps less restrictive would likely benefit the AFA processing sector and crab catcher vessels, well at the same time making non-AFA processors relatively worse off.

Fishery managers have expressed concerns regarding offload times and their impacts on removing gear from the grounds, allowing vessels to enter other fisheries, and dead-loss. From the perspective of fishery managers within the State of Alaska, regulatory changes to the processing sideboard caps that are contemplated by the Council should take these issues under consideration.

Changes to the crab processing sideboard caps that the Council is considering include two alternatives that would increase the cap and one that would completely remove the processing caps. Increasing the caps might either be accomplished by adding 1998 to the years that were used to calculate processing sideboard caps, or by allowing the AFA sector to exceed the caps by 10 to 20 percent without penalty. The increase would be based on the preseason GHL. That is an important consideration, because depending on how much the GHL is exceeded determines whether the AFA sector is made relatively better or worse off under the proposal that would allow overages. If the percentage by which the GHL is exceeded is less than the overage percentage the AFA sector is relatively better off. If the percentage by which the GHL is exceeded is greater than the overage percentage the AFA sector is relatively worse off. In this context worse off means they would have technically been allowed to process more under the status quo. It is also important to note that alternatives making the AFA sector better off will also likely make the non-AFA sector relatively worse off.

Other potential changes to the crab processing cap program were also discussed in this paper based on discussions among staffs of NMFS, ADF&G, and NPFMC. Alternatives presented in that section include changing the caps from being species based to fishery based, changing the enforcement of the caps from being entity to aggregate based, and allowing for the removal of the processing caps a given number of days after the season closes in an attempt to reduce the potential for dead-loss and excessive off-load wait times.

APPENDIX 1

ALASKA DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

At the April 2000 NPFMC meeting, the Council posed a series of questions to the department regarding the AFA processing caps and their impact on the 2000 snow crab fishery. The following are a synopsis of the department's response to these questions.

1. Was the waiting time for vessels to offload in 2000 different than 1999 or 1998 when no processing caps were in place?

   At the conclusion of the 2000 snow crab fishery, both floating processors (FP) and shoreside processing plants (Shore) experienced increased processing time. The below table indicates number of days by processing type.

	NUMBER OF DAYS PROCESSING AFTER FISHERY CLOSURE		
YEAR	CP	FP	SHORE
1998	1	8	6
1999	5	3	4
2000	4	14	10 (Dutch)

2. Was the percentage of crab deadloss substantially different in 2000 verses the five previous years when no processing caps were in place?

It appears from the table below that the percentage of deadloss in the 2000 open access show crab fishery was not significantly different than values observed in the period 1995-1999.

YEAR	DEADLOSS (lbs.)	PERCENT OF OPEN ACCESS HARVEST
1995	1,287,196	1.7
1996	1,333,014	2.0
1997	2,351,555	2.0
1998	2,893,945	1.2
1999	1,828,313	1.0
2000 (preliminary)	310,656	1.0

3. Was the percentage of crab going to locations requiring check-out (Kodiak, Adak, etc.) different during the 2000 fishery when AFA processing caps were in place verses 1999 and 1998 when no processing caps were in place?

As shown in the above table, the number of vessels which delivered outside the standard ports was higher in 2000 than in the prior two years. While this increase may have been driven in part by higher prices offered in Kodiak, the price differential offered in Kodiak over Dutch Harbor in 1998 and 1999, 19.6% and 28.4% respectively, was greater than the differential offered in Kodiak over Dutch Harbor in 2000 (+8.1%). For this reason, there may be other extenuating reasons that caused the percentage to increase.

YEAR	NUMBER OF VESSELS CHECKING OUT TO		EXVESSEL PRICE PAID TO FISHERS*			% OVER DUTCH
	KODIAK	ADAK	KODIAK	ADAK	DUTCH	
1998	6	0	$0.67	--	$0.56	19.6
1999	2	0	$1.13	--	$0.88	28.4
2000	12	1	$2.00	$2.05	$1.85	8.1

*price for number 1 bright shell crabs.

More vessels delivering to Kodiak in 2000 may have been partially driven by the fact that vessels were carrying their entire seasons catch, so any price differential would have been applied to their entire seasons harvest. Also, the closure of the Bering Sea/Aleutian Islands fixed gear Pacific cod fishery, several weeks prior to the start of the 2000 snow crab fishery, may have resulted in fewer fishery opportunities available for some vessels after the snow crab fishery closed.

4. Why did some processors choose not to operate, or not operate at certain locations, in the 2000 snow crab season?

   Processor decisions regarding which plants and/or how many crews to operate were probably based largely on economics. AFA processor caps likely had economic impacts on all processors participating in the 2000 snow crab fishery. Of equal importance, however was the relatively small guideline harvest level (GHL) of the 2000 fishery. Even in the absence of any type of processing caps, processors were facing dramatic reductions in the quantity of crabs available for processing in 2000, consequently decisions on operations would have most certainly been, in part, driven by the small GHL available in 2000.

5. What was the price per pound in 2000, verses 1999 and 1998. See question # 3.

In addition to these questions the department noted a number of issues that arose in conjunction with the AFA caps in the 2000 snow crab fishery. The department was able to address these through inseason adjustment authority. These were:

- Adjustment to processor caps based on harvest exceeding GHL and ADF&G's limitations in providing an accurate harvest revision in a timely manner to be of value to processors seeking to process their percentage of any harvest over the GHL.

  Current AFA regulations allow certain processors a percentage of the harvest, including any harvest in excess of the GHL. Due to significant penalties established for processors exceeding their cap percentage, processors need to know the exact amount of the overage when determining how much they can exceed their original allocation, which is based on the preseason GHL.

  Immediately after the close of the 2000 snow crab fishery, representatives from most processors began calling the ADF&G office in Dutch Harbor requesting a solid estimate of the actual harvest. Several processors were frustrated that actual harvest, based on processor's actual production reports, would not be available in time to allow processors to accurately adjust processing to the amount actually harvested. Information on the actual (not projected) harvest was not available to ADF&G until April 24, when processors' production reports for the week ending April 22 were due and submitted to the department.

- Inability of vessels waiting to offload to comply with 10-day interim wet gear storage regulations; and how it could affect the CDQ vessels.

  In 2000, 16 vessels contacted the department and indicated that, due to a late offload, they would be unable to clear their gear from the fishing grounds in the 10 days immediately following the closure as allowed by regulation. In 1999, processing did not extend beyond 10 days following the closure, however due to extremely bad

weather at the time of the closure, the department issued an exemption to the 10 day rule. In 1998, processing was concluded within 8 days of the fishery closure. No vessels reported having difficulty clearing the grounds within the 10 days following the closure.

Several vessels planning to participate in the 2000 Community Development Quota fishery, which were not offloaded until April 17, were given a waiver of observer coverage to return to the fishing grounds to convert their open access gear to CDQ gear to avoid violation of the 10-day post-fishery gear storage regulations.

- Current ADF&G policy provides opportunity to reduce deadloss from excessive processing wait times. Additionally, it provides for vessel movement as a result of processors reaching their AFA caps.

  Under current landing restrictions, a vessel which has participated in the Bering Sea snow crab fishery may not freely move between ports or processors with crabs on board after a specified period not exceeding 72 hours following the fishery closure.

  Prior to the 2000 season, industry representatives voiced concern that vessels, delivering to AFA processors which reached their cap, would be unable to move to another port or processing location. Also of concern was anticipated wait times longer than normal at non AFA processors, as AFA processors reached their caps and ceased processing.

  As a result of these concerns, ADF&G developed policy which allowed vessels, unable to deliver because their processor reached an AFA cap, or vessels which were beginning to experiencing abnormally high deadloss problems due to long wait times, to move to a new port and or processing location. Under this policy, vessel movements were coordinated by the department and check-out and check-in with a department representative was required. ADF&G records indicate 3 vessels requested and were granted permission to move to another processor. In all cases, the original processor had reached their AFA cap.

  In summary, crab fisheries are managed based on inseason information to achieve the preseason guideline harvest level. However, the department does not have the tools necessary to accurately manage the fleet to achieve the GHL target. Although harvest may be close to the GHL, in some years the GHL may be over or under by a substantial amount.

Appendix 2

Processors of Opilio crab by year

PROC NAME	AFA	YEAR					
		95	96	97	98	99	00
Adak Seafoods Llc	Non-AFA						1
Alaska Fresh Seafoods Inc	Non-AFA						1
Alaskan Fisheries Company	Non-AFA	1					
Alyeska Seafoods Inc	AFA	1	1	1	1	1	1
American Champion LLP	Non-AFA	1					
Aquatech	Non-AFA		1	1			
Baranof Fisheries	Non-AFA	1	1	1	1	1	1
Blue Dutch Lcc	Non-AFA					1	1
Blue Wave Seafoods Inc.	AFA	1	1	1	1	1	
Cannery Row Inc	Non-AFA			1			
CJW Fisheries	Non-AFA			1	1		
Cold Sea International	Non-AFA	1					
Courageous Fisheries	Non-AFA	1	1	1			
Courageous Seafoods	Non-AFA			1	1	1	1
Deep Creek Custom Packing	Non-AFA				1		
Deep Sea Harvester Inc.	Non-AFA	1	1	1			
Dutch Harbor Seafoods Ltd	Non-AFA	1	1				
East Point Seafood Company	Non-AFA	1					
East Point Seafood Company	Non-AFA	1					
East Point Seafood Company	Non-AFA	1					
Golden Shamrock Inc/Pro Surveyor	Non-AFA			1	1	1	1
Icicle Seafoods Inc. - Coastal Star	AFA	1	1	1	1	1	
Icicle Seafoods Inc.- Arctic Star	AFA	1	1	1	1	1	1
Icicle Seafoods Inc.- Bering Star	AFA	1		1	1	1	1
Jacquelyn R.	Non-AFA			1			
Karla Faye Co-ownership	Non-AFA	1					
King Fisher	Non-AFA				1		
Kiska Enterprise	Non-AFA				1		
M/v Westward Wind/Highland Light Sfds LLC	Non-AFA				1	1	1
Malezi Kwasi Dba Fisherman Of Alaska	Non-AFA					1	
Norquest Seafoods Inc.	Non-AFA				1		
Norquest Seafoods Inc.	Non-AFA	1					
Norquest Seafoods Inc.	Non-AFA	1	1	1	1	1	1
Norquest Seafoods Inc	Non-AFA						1
North Alaska Fisheries Inc.	Non-AFA		1	1	1		
North Pacific Processors Inc	Non-AFA	1	1		1		1
Northern Victor Partnership	AFA				1	1	
Northland Fisheries Inc.	Non-AFA	1	1	1			
Norton Sound Economic Developm	Non-AFA					1	
Ocean Beauty Seafoods (F/P Ocean Pride) Inc	Non-AFA	1	1				
Ocean Beauty Seafoods (King Crab) Inc-KOD	Non-AFA	1	1	1	1	1	1
Olympic Co-ownership	Non-AFA	1					
Osterman Fish	Non-AFA	1	1	1	1	1	

PROC NAME	AFA	YEAR					
		95	96	97	98	99	00
Pavlof Inc.	Non-AFA	1	1	1	1	1	1
Peter Pan Seafoods Inc. - King Cove	AFA	1	1	1	1	1	1
Pioneer Food Corporation	Non-AFA	1	1				
Prime Alaska Seafoods Inc.	Non-AFA		1	1	1	1	
Pro Surveyor Partnership	Non-AFA	1	1	1			
Royal Aleutian Seafoods Inc	Non-AFA	1	1	1	1	1	1
Royal Enterprise	Non-AFA				1		
Sanko Fisheries Llc	Non-AFA					1	1
Seawind Fisheries Group Llc	Non-AFA			1	1		
Snopac Products Inc	Non-AFA	1	1	1	1	1	1
South Atlantic Fisheries Llc	Non-AFA				1	1	1
Stellar Seafoods Inc.	Non-AFA	1	1	1	1	1	1
Trident Seafoods Corporation - Akutan	AFA	1	1	1	1	1	1
Trident Seafoods Corporation - Alaska Packer	AFA	1	1	1	1	1	
Trident Seafoods Corporation - Bountiful	AFA	1	1		1	1	1
Trident Seafoods Corporation - Independence	AFA	1	1	1	1	1	1
Trident Seafoods Corporation - Sea Alaska	AFA	1	1	1	1	1	
Trident Seafoods Corporation - South Naknek	AFA			1			
Trident Seafoods Corporation - St. Paul S/B	AFA	1	1	1	1	1	1
Tyson Seafood Group Inc/ Alaskan Enterprise	Non-AFA	1	1	1	1		
Tyson Seafood Group Inc/ Kiska Enterprise	Non-AFA	1	1	1	1		
Tyson Seafood Group Inc/ Royal Enterprise	AFA	1	1	1	1	1	
Tyson Seafood Group Inc (Arctic AK) - Glacier Enterprise.	AFA	1	1				
Tyson Seafood Group Inc (Arctic AK) - Gulf Wind	Non-AFA	1	1				
Tyson Seafood Group Inc (Arctic AK) - Northern Enterprise.	AFA	1	1				
Tyson Seafood Group Inc (Arctic AK) - Pacific Wind	Non-AFA	1	1				
Tyson Seafood Group Inc (Arctic AK) - Southern Wind	Non-AFA	1	1				
Tyson Seafood Group Inc (Arctic AK) - Western Enterprise	AFA	1					
Tyson Seafood Group Inc (Arctic AK) - Westward Wind	Non-AFA	1	1	1			
Unisea Inc. - Dutch Harbor	AFA	1	1	1	1	1	1
Unisea Inc. - Omnisea	AFA	1	1	1	1	1	
Unisea Inc.- Sand Point	AFA	1	1	1	1	1	
Westward Seafoods Inc - Dutch Harbor	AFA	1	1	1	1	1	1
Yamaya Corporation	Non-AFA	1					
Yardarm Knot Fisheries Llc	Non-AFA	1	1	1	1	1	1
Total		53	44	42	43	36	28